FORM PTO-1449 ATTY. DOCKET NO.: SERIAL NO .: To Be Assigned U.S. DEPARTMENT OF COMMERCE (REV. 7-80) PATENT AND TRADEMARK OFFICE 200.1125CON LIST OF PRIOR ART CITED BY APPLICANT APPLICANT(S): Ronald BURCH, et al. (Use several sheets if necessary) FILING DATE: GROUP: To Be Assigned Herewith U.S. PATENT DOCUMENTS DOCUMENT NUMBER DATE CLASS SUB FILING DATE *EXAMINER NAME **CLASS** INITIAL APPROPRIATE M 9 02/11/97 OENICK, ET AL. 435/7.93 435/188 FOREIGN PATENT DOCUMENTS DATE COUNTRY CLASS SUB TRANSLATION DOCUMENT NUMBER CLASS NO YES M ΑB 03 В 11/14/90 ΕP G0 1N 35/53 N/A N/A 96 W N/A AC 03 86 09/12/90 EP C12P 21/00 N/A 9 C12P 21/08 N/A N/A ΑD 05 09 8 1 10/21/92 EP 7 11/14/91 C07K 7/04 N/A N/A ΑE WO 91 9 **PCT** G01N 033/53 ΑF 89 11/16/89 AUSTRALIAN C12Q 001/68 N/A N/A AG ΑH OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.) W ΑI Benjamin Margolis and Richard A. Young; Screening Lexpression libraries with antibody and protein probes; pp. 1-14; 1995; DNA Cloning 2 Expression Systems A Practical Approach; IRL Press at Oxford University Press; New York. Jamie K. Scott; Identifying Lead Peptides From Epitope Libraries; pp. 1-27; 1995; Biological Approaches to Rational Drug Design; ΑJ CRC Press, Boca Raton M Kenneth Kaushansky; The Hematopoietic Colony-Stimulating Factors; pp.51-72; 1995; Biological Approaches to Rational Drug ΑK Design; CRC Press, Boca Raton. ABSTRACT - Comparative sequence and immunochemical analyses of murine monoclonal anti-morphine antibodies. Miller A 3d; ΑL Glasel JA; Department of Biochemistry, University of Connecticut Health Center, Farmington 06032. J. Mol Biol (ENGLAND) October 20, 1989, 209 (4) pp. 763-778. AM ABSTRACT for WO 9514710 A1, published June 1, 1995. Abstract - Binding of antimorphine anti-idiotypic antibodies to opiate receptors. Ng DS, Isom GE; Eur J. Pharmacol 1984, June 15; AN 102(1): pp. 187-190 DATE CONSIDERED **EXAMINER**

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not

considered. Include copy of this form with next communication to applicant.

FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE (REV. 7-80) PATENT AND TRADEMARK OFFICE								ATTY. DOCKET NO.: SERIAL NO.: To Be Assigne 200.1125CON						
	LIST O	F PRIOF	RART	CITED B	Y APPI	LICAN	APPLICANT(S): Ronald BURCH, et al.							
	(Us	se severa	sheets	s if necess	агу)		FILING DATE: He	GROUP: To Be Assigned						
						****	U.S.	PATENT DO	CUMENTS	***************************************				
*EXAMINER INITIAL		DOCI	JMEN'	T NUMBI	ER			DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE		
M	BA	4	7	9 2	4	4	6	12/20/88	KIM, ET AL.	424/85.8	424/94.1			
						F	OREIC	N PATENT	DOCUMENTS		·T	7		
	DOCUMENT NUMBER DATE							COUNTRY	CLASS	SUB	TRANSLATION			
											CLASS	YES	NO	
M	вв	wo	91	1 0	9	0	7	7/25/91	PCT	G01N 33/53	33/531	N/A	N/A	
M	ВС	wo	95	1 8	9	6	9	7/13/95	PCT	G01N 33/53	33/68	N/A	N/A	
				ОТНЕ	R PRIC)R AR	T (Incl	uding Author,	Title, Date, Pertinent	Pages, Etc.)	46+2			
M	BD	ARTICLE - Anti-idiotypic antibodies: a useful alternative for studying the biochemical expression of μ/δ opioid binding sites in mammalian brain. Karine Cucumel, Anny Cupo; Journal of Neuroimmunology 62 (1995) pp.183-195.												
pn	BF	ARTICLE- Farid, N. R., Briones-Urbina, R. & Islam, M.N. (1984) Anti-idiotypic antibodies as probes for hormone-receptor interaction. Can. Biochem. Cell Biol. 62, pp. 1225-1267.												
M	BF		ARTICLE- A Sensitive Radioimmunoassay for the Detection of Monoclonal Anti-Idiotope Antibodies; Grant Morahan, Journal of Immunology Methods, 57 (1983); pp. 165-170.											
M	BG	ARTIC Antibo	CLE- 7	The Immur Soulaima	e Resp Chama	onse Te t, et al.	owards ., Jour	s β-Adrenergic nal of Immono	Ligands and Their Rology; Vol. 136, No. 1	eceptors, VI. Idioty 0, May 15, 1986	py of Monoclo	nal Anti-alp	renolol	
141	вн		Antibodies ¹ ; Soulaima Chamat, et al, Journal of Immonology; Vol. 136, No. 10, May 15, 1986 ABSTRACT- Hydrophobic interactions and the design of receptor mimetic peptides; Martin-Moe SA, et al.; Pept Res 1995 March - April; 8(2): 70-6											
14	BI		ABSTRACT -Determination of plicamycin in plasma by radioimmunoassay; Fang K; Koller CA, et al.; Ther Drug Monit 1992 June; 14(3):225-60											
M	BJ	ABST analog	RACT	- A simple anti-idioty	free 3	H-liga bodies	nd' as. , Simn	say for rapid so nons RD; Linth	creening of hybridon nicum DS; J Neuroim	a monoclonal anti nunol 1986 May; I	bodies agains 1(3):245-9.	t neurotrans	smitter	
14	вк	librari	RACT ies. <i>Mi</i> 1):1249	imicking o	g of the f the pr	prekal edicted	likrein 1 bindi	-binding site o	f human H-kininogen typic antibodies; Vog	by ligand screeningel R; Kraufmann J	g of lambda g , et al.; <u>J Biol</u>	t11 expressi Chem 1990,	on July 25	
14	BL			- Routes to					antibody and compar	ison with its nature	al counterpart	Haynes Ml	R, et al.;	
4	ВМ	ABST	RACT	- Molecul	ar basis	of ani	tigen n	nimicry by an a	inti-idiotope; Fields B	A, et al.; Nature 19	95 April 20; 3	374(6524): 7	39-42.	
4	BN	replac	ement,	and refin	ement t	o 2.8 A	resolu		ntigens by anti-idiotyp otope-anti-idiotope Fo 691-705.					
EXAMINER	V	W	2	$V \subset$	1				DATE CONSIDE	RED 9/5/1)	•			
	nitial if	reference	consid	dered, who	ther of	not cit	tation i	s in conformar	nce with MPEP 609; I	Oraw line through c	itation if not i	n conforma	nce and	

U.S. DEPARTMENT OF COMMERCE ATTY. DOCKET NO .: SERIAL NO.: To Be Assigned FORM PTO-1449 PATENT AND TRADEMARK OFFICE 200.1125CON (REV. 7-80) APPLICANT(S): Ronald BURCH, et al. LIST OF PRIOR ART CITED BY APPLICANT (Use several sheets if necessary) GROUP: To Be Assigned FILING DATE: Herewith U.S. PATENT DOCUMENTS **SUBCLASS** DATE NAME **CLASS** FILING DATE *EXAMINER DOCUMENT NUMBER IF APPROPRIATE INITIAL 4/21/87 424/85 436/547 7 TRAMONTANO, et al. CA 4 435/108 435/188.5 9 8 3/2/93 SCHULTZ CB 5 FOREIGN PATENT DOCUMENTS CLASS SUBCLASS TRANSLATION DOCUMENT NUMBER DATE COUNTRY YES NO CC OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.) ABSTRACT- Radioimmunoassay of anticonvulsant drugs: phenytoin, phenobarbital, and primidone; Cook, C.E., et al., Quant. Anal. CD Stud. Epilepsy pp. 39-58, Raven, New York, 1976. CE ABSTRACT- Determination and control of bimolecular interactions by using overlapping peptides for epitope mapping, vaccine discovery, drug design and diagnostic purposes. Gershoni, Jonathan M., Enshel, David; PCT Int. Appl. WO 9820169 A1. ABSTRACT- Epitope identification by polyclonal antibody from phage-displayed random peptide library; Yao, Zhi-Jian, et al.; $\mathcal{U}_{\mathbf{y}}$ CJ J. Protein Chem. (1995), 14(3), 161-6. ABSTRACT-Immunochemical simulation of ligand-receptor interactions. Communication II. Interaction of N-choline receptor CG recognition-modeling antibodies with dicholine and dihomocholine esters of dicarboxylic acids; Burkin, A.A., et al.; Khim.-Farm. Zh. (1992), 26(4), 26-9. ABSTRACT for WO 8806592 A1, published September 7, 1988. CH ABSTRACT - Computer-aided molecular modeling of the binding site architecture for eight monoclonal antibodies that bind a high CJ potency guanidinium sweeter.; Anchin JM, et al.; J Mol Graph 1994, December, 12(4):257-66, 289-90. ABSTRACT - One bead, one chemical compound: use of the selectide process for anticancer drug discovery.; Salon SE, et al.; Acta CJ Oncol 1994; 33(2):127-31. ABSTRACT-Improving the antigen affinity of antibody Fv-fragment by protein design.; Reichmann L, Weill M, Cavanagh J.; CK J. Mol Biol 1992, April 20;224(4):913-8. ABSTRACT - Synthesis conformational properties, and antibody recognition of peptides containing beta-turn mimetics based on CL alpha-alkylproline derivatives.; Hinds MG, et al; J Med Chem 1991, June; 34(6):1777-89. ABSTRACT- Monoclonal antibodies against a phencyclidine derivative are used to investigate protein-ligand interactions.; Casalotti CM SO, et al.; J Pharmacol 1993, October 15; 247(2):209-13. W ABSTRACT - Complementary peptides as antibody mimetics for protein purification and assay; Fassina G.; Immunomethods 1994, CN October ;5(2):12159 DATE CONSIDERED **EXAMINER**

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE ATTY. DOCKET NO .: SERIAL NO.: To Be Assigned PATENT AND TRADEMARK OFFICE 200.1125CON (REV. 7-80) APPLICANT(S): Ronald BURCH, et al. LIST OF PRIOR ART CITED BY APPLICANT (Use several sheets if necessary) FILING DATE: Herewith GROUP: To Be Assigned U.S. PATENT DOCUMENTS *EXAMINER DOCUMENT NUMBER DATE NAME CLASS SUB FILING DATE CLASS IF APPROPRIATE INITIAL 3/7/95 PONTICELLO, ET AL. 540/589 540/575 DA 5 3 W DB 0 9 10/26/93 BLINCKO 424/85.8 424/88 N 436/548 9 0 6/24/97 SELF 435/7.1 DC 6 4 6 ħ, 6 2 5/31/94 BIGNER, ET AL. 435/193 435/803 DD 5 3 W 530/387.2 435/7.92 DE 4 6 11/23/93 SIKORSKA, ET AL N 23/230 B 4 9 6 5 4/1/80 FOCELLA, ET AL. 424/1 DF 8 M DG 5 6 8 11/21/95 SELF 436/548 435/7.1 1 DH 7 8 7 11/26/96 BRUMMOND, ET AL. 435/7.93 435/188 5 0 7 0 7/30/96 KAUVAR 435/7.9 435/7.93 DI 5 4 1 7 7 3 435/6 435/7.1 DJ 5 4 5/5/98 ECKER, ET AL. W 3 0 2 5/23/89 **GEYSEN** 436/501 436/518 3 DK 4 M 8 8/25/92 HYLARIDES, ET AL. 210/635 210/656 DL 5 1 4 1 6 7 5 4 3/1/83 STRAHILEVITZ 210/638 128/214 R DM 4 3 435/7.1 435/7.2 DN 5 5 10/15/96 **BLAKE** FOREIGN PATENT DOCUMENTS CLASS **SUBCLAS** TRANSLATION DOCUMENT NUMBER DATE COUNTRY YES NO DO OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.) DP ABSTRACT - Principles and pitfalls in designing site-directed peptide ligands.; Edmundson AB, et al.; Proteins 1993, July;16(3):246-67. ABSTRACT - A shape- and chemistry-based docking method and its use in the design of HIV-1 protease inhibitors.; DesJaralais RL, DQ Dixon JS; J Comput Aided Mol Des 1994, June;8(3):231-42. DΡ ABSTRACT- The broad utility of soluble peptide libraries for drug discovery.; Houghten RA; Gene 1993, December 27;137(1):7-EXAMINER DATE CONSIDERED *EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449 U.S. DEPARTMENT OF (REV. 7-80) PATENT AND TRADEM.										ATTY. DOCKET NO 200.1125CON	ATTY. DOCKET NO.: SERIAL NO.: To Be Assigned 200.1125CON				
1	LIST O	F PRIC	OR AR	T CIT	ED BY	' APPI	JICAN	T		APPLICANT(S): Ronald BURCH, et al.					
(Use several sheets if necessary)										FILING DATE: Here	GROUP: To Be Assigned				
								U.S	. PATENT D	OCUMENTS					
*EXAMINER INITIAL		DOCUMENT NUMBER DATE								NAME	CLASS	SUB CLASS	FILING D IF APPRO		
M	EA	5	5	9	5	9	1	5	01/21/97	GEYSEN	436/518	436/528			
M	EB	5	4	3	6	3	2	1	07/25/95	WRIGHT	530/388.25	530/388.4			
M	EC	5	6	3	7	6	7	7	06/10/97	GREENE, ET AL.	530/333	530/300			
M	ED	5	3	3	4	7	0	2	08/02/94	GREENE, ET AL.	530/323	530/317			
M.	EE	5	5	1	0	2_	4	0	04/23/96	LAM, ET AL.	435/7.1	435/4			
M	EF	5	1	9	4	3	9	2	03/16/93	GEYSEN	436/518	435/7.1			
M	EG	5	0	3	7	7	5	0	08/06/91	SCHOCHETMAN, ET AL.	435/183	435/193			
							F	OREI	GN PATENT	DOCUMENTS					
		DOCUMENT NUMBER DATE								COUNTRY	CLASS	SUB	TRANSLA	ATION	
												CLASS	YES	NO	
	ЕН														
				(THEF	R PRIC	R AR	T (Inc	cluding Autho	r, Title, Date, Pertinent	Pages, Etc.)				
py	EI		TICLE		body D	irected	l Drug	Desi	gn and Screen	ning; Manfred E. Wolff	and Edward T. N	Лаgglo; <u>Med С</u>	Chem Res (19	91)	
M	EJ	Biot	eehno	- Bioa logy, V	/olume	Peptide 1 Bio	Desig logical	n Bas lly Ac	ed on Antibod tive Peptides:	ly Structure; Joan M. V Design, Synthesis, and	on FeldT, in" <u>Bio</u> Utilization; TEO	omedical Appli CHNOMIC Pub	cations of dishing Co.,	Inc.,	
M	EK	ART N.P.	TICLE Danil	- ELIS ova; Jo	SA Scre	ening of Imn	of mon	oclor gical	nal antibodies Methods 173	to haptens: influence o (1994) 111-117.	f the chemical st	ructure of hapt	en-protein co	njugates	
M	EL									tility of GM-CSF Antag 3, Number 6, pp. 420-43		Monfardini, et a	l.; 1996 <u>; Pro</u>	ceedings	
M	EM	ART R. F	TICLE	- Predi	icting 1.; Prot	Moleci	ular In Structu	terac re, Fu	tions and Indi	icible Complementarity enetics 20:15-24 (1994	: Fragment Doci).	king of Fab-Pep	otide Comple.	xes; Ala	
M	EN		TICLE (5) pp.		n Prote	ein Eng	ineeri	ng to	Drug Design,	Imitating How Antibod	lies Do It; Mauri	zio Sollazo; <u>Th</u>	e Immunolog	<u>ist</u> 3(1)	
EXAMINER \	1/0	€ر	N	1~	<u> </u>					DATE CONSIDERE	D				
EXAMINER: In ot considered. I	itial if	feren								ance with MPEP 609; I	Oraw line through	h citation if not	in conforma	nce and	

FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE (REV. 7-80) PATENT AND TRADEMARK OFFICE								-		ATTY. DOCKET NO.: SERIAL NO.: To Be Assigned 200.1125CON					
LIST OF PRIOR ART CITED BY APPLICANT										APPLICANT(S): Ronald BURCH, et al.					
(Use several sheets if necessary)										FILING DATE: Herewith	GROUP: To Be Assigned				
									U.S. PATE	ENT DOCUMENTS					
*EXAMINER INITIAL	ER DOCUMENT NUMBER DATE									NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE		
M	FA	4 9 0 0 6 7 4				7	4	02/13/90	BENKOVIC, ET AL.	435/232	435/183				
M	FB	5	1	5	6	9	6	5	10/20/92	SCHOCHETMAN, ET AL.	435/188.5	435/240.27			
M	FC	5	3	8	2	5	1	3	01/17/95	LAM, ET AL.	435/7.1	435/4			
M	FD	5	2	2	5	5	3	3	07/06/93	RUTTER, ET AL.	530/334	530/333			
									FOREIGN PA	ATENT DOCUMENTS	·	_			
	DOCUMENT NUMBER DATE						ER		DATE	COUNTRY	CLASS	SUB	TRANSLATIO		
												CLASS	YES	NO	
*****	FE														
					ОТ	HER	PRIO	R A	RT (Including	Author, Title, Date, Pertinent F	ages, Etc.)				
M	FF		TICL 67-69		ntibe	ody a	s a su	rrog	ate receptor i	n the screening of a phage displ	ay library; Dou	g Roberts, et al.	Gene 128 (1	1993)	
M	FG	AR (19	ARTICLE - Recombinant Antibodies in Bioactive Peptide Design; Cristina Monfardini, et al.; The Journal of Biological Chemistry (1995) Vol. 270, No. 12, Issue of March 12, pp. 6628-6638.												
W	FH	AR O.	ARTICLE - Monoclonal antibodies against a phencyclidine derivative are used to investigate protein-ligand interactions; Stefano O. Casalotti, et al.; European Journal of Pharmacology - Molecular Pharmacology Section, 247 (1993) 209-213.												
m	FK	AR	TICL	E - N	ew I	Perse	pctive:	s on	Catalytic Ant	ibodies; Jeffrey W. Jacobs; Bio	Technology Vo	ol 9, March, 199	1 pp. 258-20	52.	
M,	FL	AR	ARTICLE - Molecular basis of antigen mimicry by an anti-idiotope; Barry A. Fields, et al.; Nature Vol. 374, pp. 739-742.												
ful	FM	ARTICLE - Tautomer-Specific Anti-(N-3-Substituted)-Adenine Antibodies: New Tools in Molecular Dosimetry and Epidemiology; Karl-Heinz Glüsenkamp; Angew. Chem. Int. Ed. Engl. (1993) 32, No. 11 pp. 1640-1643.													
	FN														
EXAMINER ,	l n	N	1	V	$\sqrt{}$	1	1			DATE CONSIDERED					
*EXAMINER: I										conformance with MPEP 609; I	Oraw line throu	gh citation if not	in conforma	nce an	